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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/985,788	11/06/2001	Olympia Gluck	GLUCK=1	4468
1444	7590	10/14/2005	EXAMINER	
BROWDY AND NEIMARK, P.L.L.C. 624 NINTH STREET, NW SUITE 300 WASHINGTON, DC 20001-5303			WANG, LIANG-CHE	
			ART UNIT	PAPER NUMBER
			2155	

DATE MAILED: 10/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/985,788

Applicant(s)

GLUCK ET AL.

Examiner

Liang-che Alex Wang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/31/02
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. Claims 1-45 are presented for examination.

Paper Submitted

2. It is hereby acknowledged that the following papers have been received and placed of record in the file:
 - a. **Information Disclosure Statements** as received on 1/31/2002 is considered.

Claim Objections

3. Claim 40 is objected to because of the following informalities:
 - a. Claim 40 should depend on a claim 38, not claim 23.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 11, 13, 15-19, 26, 28, 30-34, 41, 43, 45 are rejected under 35 U.S.C. 102(b) as being anticipated by West et al., US Patent Number 6,131,148, hereinafter West.

6. Referring to claim 1, West teaches a method for copying data over a network operating in accordance with a protocol that supports a given logical address range (see abstract), the method comprising:
- a. establishing a logical path (figure 1 item 40) over the network from a primary storage system (item 12) to a secondary storage system (item 14) (Col 3 lines 50-54) using path logical addresses within the given logical address range (Col 1 lines 33-37, 51-58, and Col 6 lines 5-8);
 - b. creating a virtual path over the logical path (virtual path between systems 22 and 50 via VTAM 24, fig 2) to carry the data from a source storage device (item 32) in a first logical subsystem (item 28) of the primary storage system (item 12) to a target storage device (item 60) in a second logical subsystem (item 57) of the secondary storage system (item 14)(Col 4 line 27 – Col 6 line 11), the first and second logical subsystems having respective first and second subsystem logical addresses (Col 9 lines 1-4, 8-11, virtual addresses) which are outside the given logical address range (Col 11 lines 47-58, West's invention tries to solve the limited addresses by using virtual addresses which corresponds to the logical addresses outside of the given logical address range);
 - c. initiating a peer-to-peer remote copy (PPRC) operation to copy the data from the source storage device to the target storage device by sending a command frame over the logical path from the primary storage system to the secondary storage system, followed by a first data frame identifying the target storage device, such that both the command and data frames are arranged to comply with the protocol

- (Col 2 lines 2-37, Col 3 lines 32-40, protocols must be complied for the system to work, protocol incompatible would lead to transmission failure); and
- d. sending one or more further data frames over the logical path following the first data frame, the further data frames complying with the protocol and containing the data to be copied in the PPRC operation (Col 4 lines 23-27).
7. Referring to claim 2, West teaches a method according to claim 1, wherein creating the virtual path comprises creating a plurality of virtual paths to carry the data between respective source and target storage devices (figure 2, Col 5 lines 7-12), and wherein establishing the logical path comprises designating one of the path logical addresses to carry the plurality of the virtual paths (Col 6 lines 5-10, and Col 1 lines 33-37).
8. Referring to claim 3, West teaches a method according to claim 2, and comprising: establishing a further logical path over the network to carry the data in a further PPRC operation between further source and destination storage devices in third and fourth logical subsystems of the primary and secondary storage systems, respectively, both the third and fourth logical subsystems having respective third and fourth subsystem logical addresses within the given logical address range; and conveying the data between the further source and destination storage devices over the further logical path in accordance with the protocol (same as claimed invention in claim 1, see rejection to claim 1).
9. Referring to claim 4, West teaches a method according to claim 3, wherein the source and destination storage devices in the first and second logical subsystems comprise fixed-block storage devices (figure 2 items 32 and 60), while the further source and destination storage devices in the third and fourth logical subsystems comprise devices of a type that

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stores records of variable size (figure 2 items 32 and 60) (all conventional storages are fixed block storage that stores variable size data which the data size is smaller than its available capacity.).

10. Referring to claims 11, 13, 15 claims 11, 13, 15 encompass the same scope of the invention as that of the claims 1-4. Therefore, claims 11, 13, 15 are rejected for the same reason as the claims 1-4.
11. Referring to claims 16-19, 26, 28, 30, 31-34, 41, 43, 45 claims 16-19, 26, 28, 30, 31-34, 41, 43, 45 encompass the same scope of the invention as that of the claims 1-4, 11, 13, 15. Therefore, claims 16-19, 26, 28, 30, 31-34, 41, 43, 45 are rejected for the same reason as the claims 1-4, 11, 13, 15.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
13. Claims 5-10, 12, 14, 20-25, 27, 29, 35-40, 42, 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over West in view of Applicant Admitted Prior Art (AAPA).
14. Referring to claims 5-10, 12, 14, claims 5-10, 12 and 14 recites the limitation which describes all the known functions of PPRP and ESCON which are taught by West (Col 2 lines 21-60 and Col 5 lines 51-65).

West does not explicitly give a detail description of PPRP and ESCON. However, AAPA in pages 1-5 of the specification filed on 11/06/2001 gives a detail description of PPRP and ESCON with the claimed limitations.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to incorporate the description of PPRP and ESCON in West because PPRP and ESCON are known products of IBM, and both of West and AAPA are describing the same system by using PPRP and ESCON.

A person with ordinary skill in the art would have been motivated to make the modification to West because PPRP and ESCON are known products of IBM.

15. Referring to claims 20-25, 27, 29, 35-40, 42, 44, claims 20-25, 27, 29, 35-40, 42, 44 encompass the same scope of the invention as that of the claims 5-10, 12, 14. Therefore, claims 20-25, 27, 29, 35-40, 42, 44 are rejected for the same reason as the claims 5-10, 12, 14.


Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is reminded that in amending in response to a rejection of claims, the patentable novelty must be clearly shown in view of the state of the art disclosed by the references cited and the objection made. Applicant must show how the amendments avoid such references and objections. See 37 CFR 1.111(c).
17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Liang-che Alex Wang whose telephone number is

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(571)272-3992. The examiner can normally be reached on Monday thru Friday, 8:30 am to 5:00 pm.

18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571)272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
19. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Liang-che Alex Wang 
October 4, 2005


SALEH NAJJAR
SUPERVISORY PATENT EXAMINER